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AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A target object inspection system comprising:

a first detector for detecting radiation from a radiation source;

[[a]] at least one helium neutron ~~second~~ detector for detecting radiation from the target object;

a mobile platform including the first detector, the helium neutron ~~second~~ detector and the radiation source; and

a boom connected to the radiation source at a first end of the boom and the mobile platform at a second end of the boom, wherein the first end of the boom is deployed so as to effect passage of the target object between the radiation source and the first detector and helium neutron detector ~~second detectors~~, and further wherein the mobile platform and the target object pass alongside one another during inspection;

the mobile platform being capable of inspecting a target object either when the mobile platform is stationary or when the mobile platform is moving;

wherein the mobile platform is a truck which includes a truck bed and the first detector and the helium neutron detector are located on the truck bed;

and further wherein the helium neutron detector is capable of operating in two modes:

integral mode, wherein the neutron detector is turned ON and OFF by an operator and detects neutrons only while ON; and

differential mode, wherein the neutron detector is always ON and is set to detect neutrons above a pre-set threshold level.

2. (Original) The system according to claim 1, wherein the first detector is a photon detector.

3. (Cancelled)

4. (Original) The system according to claim 1, wherein the first detector detects radiation from the radiation source after the radiation passes through the target object.

5. (Original) The system according to claim 1, wherein the radiation source is a gamma radiation source.

6. (Cancelled)

7. (Original) The system according to claim 2, further comprising:

a counter for discretely counting photons received by the first detector; and

a display responsive to the counter for generating a display of the target object in response to the counter.

8. (Currently Amended) The system according to claim [[3]]1, further comprising an indicator for indication the presence of neutrons.

9-39. (Cancelled).

40.-42. (Cancelled)

43. (Previously Presented) The system according to claim 1, further comprising, a velocity measuring device capable of measuring the velocity of the target during inspection;

a processor capable of receiving first data indicative of the velocity of the target and capable of receiving second data from the first detector and forming an image of the contents of the target object using the first and second data.

44. (Previously Presented) The system according to claim 43, wherein the velocity measuring device is a Doppler radar system.

45. (Previously Presented) The system according to claim 43, wherein the velocity measuring device is a radar range finder.

46. (Previously Presented) The system according to claim 43, wherein the velocity measuring device comprises at least two pressure pads spaced a known distance apart.

47. (Cancelled).